

LISTING OF THE CLAIMS

1. (Previously Presented) A dye-sensitized solar cell comprising:

a semiconductor electrode containing a dye and a carboxylic compound, the carboxylic compound being at least one acid selected from the group consisting of acetic acid ($\text{CH}_3\text{CO}_2\text{H}$), propionic acid ($\text{CH}_3\text{CH}_2\text{CO}_2\text{H}$), 3-bromopropionic acid ($\text{BrCH}_2\text{CH}_2\text{COOH}$), benzoic acid ($\text{C}_6\text{H}_5\text{CO}_2\text{H}$) and butyric acid ($\text{CH}_3\text{CH}_2\text{CH}_2\text{CO}_2\text{H}$), the dye and the carboxylic compound being carried on a surface of the semiconductor electrode;

a counter electrode; and

an electrolyte composition provided between the semiconductor electrode and the counter electrode, and containing an electrolyte that contains iodine and molten salt of iodide.
2. (Original) The dye-sensitized solar cell according to claim 1, wherein the electrolyte composition further contains a gelling agent.
3. (Original) The dye-sensitized solar cell according to claim 2, wherein the gelling agent includes polyvinyl pyridine.
4. (Original) The dye-sensitized solar cell according to claim 1, wherein the electrolyte composition further contains inorganic salt of iodide.
5. (Original) The dye-sensitized solar cell according to claim 1, wherein the electrolyte composition further contains a viscosity-lowering agent containing at least one compound selected from the group consisting of salt of nitrogen-containing heterocyclic compound (excluding halide of nitrogen-containing heterocyclic compound) and salt of aliphatic compound.

6. (Original) The dye-sensitized solar cell according to claim 1, wherein the molten salt of iodide includes iodide of nitrogen-containing heterocyclic compound.

7. (Original) The dye-sensitized solar cell according to claim 1, wherein the molten salt of iodide includes 1-methyl-3-propyl imidazolium iodide.

8. (Canceled)

9. (Original) The dye-sensitized solar cell according to claim 1, wherein the electrolyte further contains water.

10. (Original) The dye-sensitized solar cell according to claim 9, the content of water in the electrolyte is in a range from 0.01 wt.% to 10 wt.%.

11. (Original) The dye-sensitized solar cell according to claim 1, wherein the semiconductor electrode contains titanium oxide particles.

12. (Original) The dye-sensitized solar cell according to claim 1, wherein the electrolyte composition is substantially in the form of a liquid or a gel.

13. (Previously Presented) The dye-sensitized solar cell according to claim 1, wherein the carboxylic compound is at least one acid selected from the group consisting of acetic acid ($\text{CH}_3\text{CO}_2\text{H}$), benzoic acid ($\text{C}_6\text{H}_5\text{CO}_2\text{H}$) and butyric acid ($\text{CH}_3\text{CH}_2\text{CH}_2\text{CO}_2\text{H}$).

14. (Previously Presented) The dye-sensitized solar cell according to claim 1, wherein the carboxylic compound is at least one acid selected from the group consisting of acetic acid ($\text{CH}_3\text{CO}_2\text{H}$), propionic acid ($\text{CH}_3\text{CH}_2\text{CO}_2\text{H}$), 3-bromopropionic acid ($\text{BrCH}_2\text{CH}_2\text{COOH}$), and butyric acid ($\text{CH}_3\text{CH}_2\text{CH}_2\text{CO}_2\text{H}$).